

## CLAIMS

What is claimed is:

1. An electronic device for data processing, said electronic device comprising:
  - 5 a processor; and
  - a computer readable memory coupled to said processor and containing program instructions stored therein that when executed implement a method for enabling a dynamic and scaleable system architecture, said method comprising the steps of:
    - 10 a) detecting the availability of a new function;
    - b) receiving an input interface specification for said new function;
    - c) receiving an output interface specification for said new function;
    - d) determining if a first available function has an output interface specification that is compatible with said input interface specification for said new
    - 15 function;
    - e) determining if a second available function has an input interface specification that is compatible with said output interface specification for said new function; and
    - f) selectively enabling said new function to receive data from said first
    - 20 available function and to supply data to said second available function if results from steps d) and e) are acceptable.

2. The electronic device recited in Claim 1 further comprising:  
an adapter for receiving a module that will add functionality to said electronic device.

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3. The electronic device recited in Claim 1 wherein said method further comprises the step of:

g) dynamically instantiating said new function if a performance criteria for said electronic device is satiated.

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4. The electronic device recited in Claim 1 wherein said method further comprises the steps of:

g) providing a graphical user interface (GUI) indicating that said new function can be enabled; and

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h) receiving input from said GUI as to whether said new function should be enabled.

5. The electronic device recited in Claim 1 wherein said input interface specification and said output interface specification provides information regarding a type of data and a format of data for said function.

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6. The electronic device recited in Claim 5 wherein said information, provided in said input interface specification and said output interface specification, is formatted in a descriptive language.

5           7. The electronic device recited in Claim 6 wherein said descriptive language is Extensible Markup Language (XML).

8. The electronic device recited in Claim 1 wherein said method further comprises the steps of:

- 10           g) detecting the cessation of a previously existing function;
- h) identifying an output interface specification of a supplying function that supplied data to said previously existing function;
- i) identifying an input interface specification of a receiving function that received data from said previously existing function;
- 15           j) determining whether said output interface specification of said supplying function and said input interface specification of said receiving function are compatible; and
- k) linking said supplying function and said receiving function if results from step j) are acceptable.

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9. A computer system for processing functions, said computer system comprising:

multiple processing components; and

a computer readable memory coupled to said multiple processing components and containing program instructions stored therein that when executed implement a method for enabling a dynamic and scaleable system architecture, said method comprising the steps of:

- a) detecting the availability of a new function;
- b) receiving an input interface specification for said new function;
- c) receiving an output interface specification for said new function;
- d) determining if a first available function has an output interface

specification that is compatible with said input interface specification for said new function;

e) determining if a second available function has an input interface specification that is compatible with said output interface specification for said new function; and

f) selectively enabling said new function to receive data from said first available function and to supply data to said second available function if results from steps d) and e) are acceptable.

10. The computer system recited in Claim 9 further comprising:

an adapter for receiving a module that will add functionality to said computer system.

11. The computer system recited in Claim 9 wherein said method further comprises the step of:

g) dynamically instantiating said new function if a performance criteria for said computer system is satiated.

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12. The computer system recited in Claim 9 wherein said method further comprises the steps of:

g) providing a graphical user interface (GUI) indicating that said new function can be enabled; and

10 h) receiving input from said GUI as to whether said new function should be enabled.

13. The computer system recited in Claim 9 wherein said input interface specification and said output interface specification provides information regarding a  
15 type of data and a format of data for said function.

14. The computer system recited in Claim 13 wherein said information, provided in said input interface specification and said output interface specification, is formatted in a descriptive language.

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15. The computer system recited in Claim 14 wherein said descriptive language is Extensible Markup Language (XML).

16. The computer system recited in Claim 9 wherein said method further comprises the steps of:

g) detecting the cessation of an existing function;

5 h) identifying an output interface specification of a supplying function that supplied data to said existing function;

i) identifying an input interface specification of a receiving function that received data from said existing function;

10 j) determining whether said output interface specification of said supplying function and said input interface specification of said receiving function are compatible; and

k) linking said supplying function and said receiving function if results from step j) are acceptable.

15 17. A computer readable medium containing therein computer readable codes for causing a computer to implement a method for enabling a dynamic and scaleable system architecture, said method comprising the steps of:

a) detecting the availability of a new function;

b) receiving an input interface specification for said new function;

20 c) receiving an output interface specification for said new function;

d) determining if a first available function has an output interface specification that is compatible with said input interface specification for said new function;

e) determining if a second available function has an input interface specification that is compatible with said output interface specification for said new function; and

f) selectively enabling said new function to receive data from said first available function and to supply data to said second available function if results from steps d)

5 and e) are acceptable.

18. The computer readable medium recited in Claim 17 wherein said method further comprises the step of:

g) dynamically instantiating said new function if a performance criteria for said  
10 computer is satiated.

19. The computer readable medium recited in Claim 17 wherein said method further comprises the steps of:

g) providing a graphical user interface (GUI) indicating that said new function  
15 can be enabled; and

h) receiving input from said GUI as to whether said new function should be enabled.

20. The computer readable medium recited in Claim 17 wherein said input  
20 interface specification and said output interface specification provides information regarding a type of data and a format of data for said function.

21. The computer readable medium recited in Claim 17 wherein said method further comprises the steps of:

g) detecting the cessation of an existing function;

5 h) identifying an output interface specification of a supplying function that supplied data to said existing function;

i) identifying an input interface specification of a receiving function that received data from said existing function;

10 j) determining whether said output interface specification of said supplying function and said input interface specification of said receiving function are compatible; and

k) linking said supplying function and said receiving function if results from step j) are acceptable.

15 22. An electronic module for adding functionality to a host computer, said electronic module comprising:

a processor; and

a computer readable memory coupled to said processor and containing program instructions stored therein that when executed implement a method for  
20 enabling a dynamic and scaleable system architecture, said program instructions including a function, an input interface specification, and an output interface specification.



23. The electronic module recited in Claim 22 wherein said method comprises the steps of:

- a) providing an input interface specification for a function contained in  
5 said electronic module;
- b) providing an output interface specification for said function;
- c) providing said function if enabled by a host computer.

24. The electronic module recited in Claim 23 further comprising:  
10 an adapter for coupling said electronic module to a host computer.

25. The electronic module recited in Claim 23 wherein said method further comprises the steps of:

- g) providing a graphical user interface (GUI) indicating that said new  
15 function can be enabled; and
- h) receiving input from said GUI as to whether said new function should be enabled.

26. The electronic module recited in Claim 23 wherein said input interface  
20 specification and said output interface specification provides information regarding a type of data and a format of data for said function.

27. A computer readable medium containing therein computer readable codes for causing a computer to implement a method for enabling a dynamic and scaleable system architecture, said method comprising the steps of:

- a) indicating the installation of a module into a host computer system, said  
5 module providing a function;
- b) providing information regarding said function in an input interface specification and an output interface specification; and
- c) receiving instructions from said host computer system regarding execution of said function.

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28. The computer readable medium recited in Claim 27 wherein said information, provided in said input interface specification and said output interface specification, is formatted in a descriptive language.

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29. The computer readable medium recited in Claim 28 wherein said descriptive language is Extensible Markup Language (XML).